

<!--StartFragment-->RESULT 2

AAW86008

ID AAW86008 standard; protein; 464 AA.

XX

AC AAW86008;

XX

DT 17-OCT-2003 (revised)

DT 29-MAR-1999 (first entry)

XX

DE Helicobacter pylori alpha-1,3-fucosyltransferase.

XX

KW Alpha-1,3-fucosyltransferase; fuct gene; Lewis X; Lewis Y;
 KW sialyl Lewis X; tumour associated antigen; cancer; infection;
 KW mucosal disease; diagnosis; fucosylated oligosaccharide.

XX

OS Helicobacter pylori; strain NCTC 11639.

XX

FH Key Location/Qualifiers

FT Modified-site 96. .99

FT /note= "Asn is N-glycosylated"

FT Modified-site 137. .139

FT /note= "Asn is N-glycosylated"

FT Modified-site 332. .334

FT /note= "Asn is N-glycosylated"

FT Modified-site 341. .343

FT /note= "Asn is N-glycosylated"

FT Peptide 364. .370

FT /note= "peptide repeat"

FT Peptide 371. .377

FT /note= "peptide repeat"

FT Peptide 378. .384

FT /note= "peptide repeat"

FT Peptide 385. .391

FT /note= "peptide repeat"

FT Peptide 392. .398

FT /note= "peptide repeat"

FT Peptide 399. .405

FT /note= "peptide repeat"

FT Peptide 406. .412

FT /note= "peptide repeat"

FT Peptide 413. .419

FT /note= "peptide repeat"

FT Modified-site 435. .437

FT /note= "Asn is N-glycosylated"

XX

PN W09855630-A2.

XX

PD 10-DEC-1998.

XX

PF 05-JUN-1998; 98WO-CA000564.

XX

PR 06-JUN-1997; 97US-0048857P.

XX

PA (UYAL-) UNIV ALBERTA.

XX

PI Taylor DE, Ge Z;

XX

DR WPI; 1999-059913/05.

DR N-PSDB; AAV80321.

XX

PT New isolated alpha-1-3-fucosyltransferase gene - obtained from

Sequence Alignment
only

PT Helicobacter pylori, used to develop products for the diagnosis and
PT treatment of intestinal mucosal diseases, e.g. tumours.
XX
PS Claim 6; Fig 2; 51pp; English.
XX
CC This is the amino acid sequence of the novel alpha-1,3-
CC fucosyltransferase of Helicobacter pylori NCTC 11639, as deduced from the
CC newly isolated fucT gene (see AAV80321). The enzyme is characterised by 8
CC C-terminal heptad repeats and by the lack of a transmembrane domain. The
CC absence of a transmembrane domain allows the enzyme to be readily
CC released from recombinant host cells. The enzyme can be used in the
CC production of fucosylated oligosaccharides such as Lewis X, Lewis Y and
CC sialyl Lewis X, which are structurally similar to certain tumour
CC associated antigens found in mammals. These glycoconjugates also have
CC research and diagnosis utility in the development of assays to detect
CC mammalian tumours. The enzyme can also be used to raise specific
CC antibodies. Inhibition of abnormal fucT gene product activity can be used
CC for the treatment of intestinal mucosal disease. (Updated on 17-OCT-2003
CC to standardise OS field)
XX
SQ Sequence 464 AA;

Query Match 87.1%; Score 2081; DB 2; Length 464;
Best Local Similarity 87.1%; Pred. No. 3.9e-174;
Matches 393; Conservative 15; Mismatches 27; Indels 16; Gaps 2;

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|----|-----|--|-----|
| Qy | 1 | MFQPLLDAYVESASIEKMASKSPPLKIAVANWVGDEEIKEFKNSVLYFIFSQRYTIALH | 60 |
| Db | 1 | MFQPLLDAYVESASIEKMASKSPPLKIAVANWVGDEEIKEFKNSVLYFIFSQRYTITLH | 60 |
| Qy | 61 | QNPNEFSDLVFSNPLGSARKILSYQNAKRVFYTGGENVPNFNLFDYAIGFDELDFRDRL | 120 |
| Db | 61 | QNPNEFSDLVFGNPLGSARKILSYQNAKRVFYTGGENSPNFNLFDYAIGFDELDFNDRL | 120 |
| Qy | 121 | RMPLYYDRLHHAESVNDTTSFYKLKDNSLYTLKKPSHQFKENHPNLCVVNDES DPLKR | 180 |
| Db | 121 | RMPLYYDRLHHAESVNDTTAPYKLKDNSLYALKKPSHC FKEKHPNLCVVNDES DPLKR | 180 |
| Qy | 181 | GVVSFVASNANAPMRNAFYDALNSIEPVTGGGSVKNTLGYNVKNKSEFLSQYKFNL CFEN | 240 |
| Db | 181 | GFASFVASNPNAPIR NAFYDALNSIEPVTGGGSVRNTLGYNVKNKNEFLRQYKFNL CFEN | 240 |
| Qy | 241 | SQGYGYVTEKILDAYFSHTIPIYWGSPSAKDFNPKFVNVHDFNNFDEAIDYIKYLH TH | 300 |
| Db | 241 | TQGYGYVTEKIIDAYFSHTIPIYWGSPSAKDFNPKSFVNVHDFKNFDEAIDYIKYLH TH | 300 |
| Qy | 301 | PNAYLDMLYENPLNALDGKAYFYQDLSFKKILAFFKTILENDTIYHKSSTSFMWEC DLDE | 360 |
| Db | 301 | KNAYLDMLYENPLNTLDGKAYFYQNL SFKKILAFFKTILENDTIYH--DNPFIFCRDLNE | 358 |
| Qy | 361 | PLASIDDLRV-----NYDDL RVNYDDL RVNYDDL RVNYDDL RVNYDDL RVN | 406 |
| Db | 359 | PLVTIDDL RVNYDDL RVNYDDL RIN YDDL RVNYDDL RVNYDDL RIN YDDL RVNYDDL RVN | 418 |
| Qy | 407 | YERLLQNASPLLELSQNTSFKIYRKAYQKPI | 437 |
| Db | 419 | YERLLSKATP LLELSQNTTSKIYRKAYQKSL | 449 |

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<!--EndFragment-->
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